REVIEW ARTICLE

Evolution of the Medicare Part D Medication Therapy Management Program from Inception in 2006 to the Present

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BACKGROUND: In 2006, the Centers for Medicare & Medicaid Services (CMS) implemented the newly established Medicare Part D program that required plan sponsors to offer a medication therapy management (MTM) program. The MTM program requirements have become more prescriptive over the past decade in the attempt to address low beneficiary enrollment rates, improve the quality of services provided, and address gaps in meeting the needs of enrollees.

OBJECTIVE: To describe changes to the requirements for the Medicare Part D MTM program since its inception in 2006 and the impact of these changes to inform future program enhancements.

METHODS: We obtained publicly available information extracted from the Medicare Part D MTM program fact sheets for the years 2008 through 2018, in addition to searching indexed literature through PubMed and additional literature through Internet searches. We then categorized the program's requirement changes annually, and described the Part D MTM program characteristics and reported statistics.

DISCUSSION: Significant changes to the Part D MTM program requirements occurred in 2010, 2013, and 2016 regarding eligibility criteria, MTM services, and reporting requirements. Thresholds to determine beneficiary eligibility have been lowered. Specific MTM services now include an annual comprehensive medication review, followed by a written summary using the Standardized Format. Quarterly targeted medication reviews are also required. Reporting requirements now include comprehensive medication review completion rates and the number of prescriber interventions, among others. Despite more prescriptive MTM program requirements, the low utilization of the MTM program continues.

CONCLUSION: Low beneficiary enrollment rates in the Medicare Part D MTM program led CMS to lower thresholds required for eligibility to expand the beneficiary pool. More prescriptive MTM service requirements enhanced service standardization. Despite these changes, MTM enrollment and comprehensive medication review rates remain low, likely, in part, from a lack of financial incentives. The Enhanced MTM program is a 5-year test model that is providing participating Part D plans regulatory flexibility and financial incentives to design their own MTM programs, to evaluate the impact of different program designs on beneficiary engagement and outcomes.

KEY WORDS: comprehensive medication review, Medicare beneficiaries, Medicare Part D MTM program, MTM eligibility criteria, MTM program design, MTM program services

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On January 1, 2006, Medicare beneficiaries were first able to access the Part D benefit either through a Medicare Advantage prescription drug plan or a stand-alone prescription drug plan.[1] Along with providing prescription drug coverage, Medicare Part D sponsors were also required to offer a medication therapy management (MTM) program to eligible beneficiaries.[2] Through the MTM program, pharmacists or

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KEY POINTS

- Since its inception in 2006, the Medicare Part D MTM program requirements have evolved to enhance enrollment, improve quality of services, and reduce gaps in care.
- Plans with more restrictive criteria had lower enrollment—16.4% when requiring 2 chronic diseases to enroll and 9.2% with 3 chronic conditions.
- Low enrollment led CMS to decrease eligibility thresholds and to add an annual medication review and a written summary to MTM services.
- CMS further enhanced MTM services by adding a new metric, comprehensive medication review completion to the CMS Star Rating.
- Part D plans are now required to describe their MTM program on their website to promote access to and comprehension of the available services.
- Nevertheless, MTM enrollment and comprehensive medication review completion rates remain low, likely as a result of a lack of financial incentives.
- Remodeling their budget allocation for MTM to costs other than administrative costs may offer an opportunity to increase enrollment.

other qualified providers interact with patients and/or their healthcare providers to ensure that medications are appropriately used to optimize therapeutic outcomes and reduce the risk for adverse events.[2]

The Pharmacy Quality Alliance, an organization that develops strategies for measuring and reporting performance information related to medications, has endorsed a measure that is now required by the Centers for Medicare & Medicaid Services (CMS) for MTM programs.[3] With a focus on achieving optimal medication use, CMS has updated the requirements for MTM programs several times since its inception in 2006.

The purpose of this article is to describe the changes to the Medicare Part D MTM program requirements over the years and the impact these changes have had on Medicare beneficiaries with the goal of informing future program enhancements.

Methods

In this review, we examined policy changes in the Medicare Part D MTM program based on information found by searching the CMS website, PubMed, and through Google searches. The search bar on the homepage of the CMS website (www.cms.gov) was used to identify Medicare Part D MTM program fact sheets and call letters between 2006 and December 2018. The CMS MTM fact sheets provide annual reviews of the MTM program, whereas the call letters detail the upcoming year's MTM program requirements.

We used the PubMed database search to identify peer-reviewed published articles. The search terms were "Medication Therapy Management" as a major medical subject heading and "Medicare and policy." The gray literature was searched using Google search engine by combining "Medication Therapy Management" or "MTM" with "Medicare" or "Part D," and "policy," "change," or "implications." The PubMed and Google searches were initially performed in October 2016 and were repeated in March 2018 to identify the additional Part D MTM program requirements and policy implications since our initial search.

At the time of our research, 11 publicly available Medicare Part D MTM program fact sheets were available for 2008 through 2018 on the CMS website; however, the 2008 fact sheet is no longer available.[4-13] Although these were created starting in 2006, fact sheets for 2006 and 2007 were not publicly available. The most recent fact sheet for 2018 was published on August 20, 2018.[13]

Evolution of the MTM Program

The initial design of the Medicare Part D program required Medicare beneficiaries to meet 3 criteria to be eligible for the MTM services, including[4]:

1. Have multiple chronic diseases
2. Take multiple drugs covered by Medicare Part D
3. Be likely to incur annual costs for covered Part D drugs that exceed a predetermined level.

Several changes have been made to the initial Part D MTM program eligibility criteria (**Table**).[4,5,7,8] Since 2006, Part D plan sponsors were required to target beneficiaries who had multiple chronic diseases with a minimum specified threshold of 2 to 5 chronic diseases.[4] In defining multiple chronic diseases, sponsors had to indicate if they would target any chronic disease or only specific chronic diseases.

In 2010, CMS added a ceiling and a floor for the minimum number of chronic diseases that may be required. At least 2 or 3 chronic diseases were required to qualify for Part D MTM services. In 2010, approximately 72% of Part D MTM programs required a minimum threshold of 3 chronic diseases compared with only 51% in 2008 (**Figure 1**).[4-13] Plan sponsors continue to set restrictive criteria, and in 2018, approximately 87% of plans still required a minimum of 3 chronic conditions; the 2019 program requirements for Part D MTM programs are unchanged from calendar years 2017 and 2018.[13,14]

In 2008, CMS also set a required minimum range of

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Table Major Changes to Medicare Part D MTM Program

Variable	2008[4] (Initial requirements)	2010[5]	2012[7]	2013[8]
Eligibility criteria				
Threshold for chronic diseases	• 2-5 chronic diseases • May indicate whether targeting all chronic diseases or specific chronic diseases	• 2 or 3 chronic diseases • May target any chronic disease or specific chronic diseases, which had to include ≥4 of 7 chronic diseases: hypertension, heart failure, diabetes, dyslipidemia, respiratory disease (ie, asthma, COPD), bone disease-arthritis, mental health diseases	• Any chronic disease or specific chronic diseases, which had to include ≥5 of 9 chronic conditions with any combination (Alzheimer's disease and end-stage renal disease were added to the previous list of 7 chronic diseases)	No changes
Multiple Part D drugs	2-15 Part D drugs	2-8 Part D drugs	No changes	No changes
Likely to incur annual costs	Annual costs for covered Part D drugs >$4000	Annual costs for covered Part D drugs >$3000	• Annual costs for covered Part D drugs >$3100.20 • Increases annually by a specified percentage in §423.104(d)(5)(iv)	No changes
Targeted interventions for beneficiaries and/or prescribers				
Targeted intervention	May include any type or combination of MTM interventions	Sponsors required to offer a minimum level of MTM services (annual comprehensive medication review and quarterly TMRs)	No changes	MTM services expanded to provide beneficiaries a written summary of their comprehensive medication review in the Standardized Format
Targeted population for intervention	Sponsors decide whether services provided to the beneficiary, the provider, or to both	Services provided to beneficiaries (excluding long-term care beneficiaries) and to providers	No changes	Service provision expanded to include long-term care beneficiaries
MTM program reporting	Sponsors required to report: • Number of beneficiaries eligible for MTM services • Reason beneficiaries opted out • Costs and total number of 30-day prescription equivalents for each participating beneficiary	Reporting requirements expanded to include: • Percent of beneficiaries receiving comprehensive medication review • Number of TMRs conducted • Number of prescriber interventions • Changes in medication therapy resulting from interventions	No changes	No changes

COPD indicates chronic obstructive pulmonary disease; MTM, medication therapy management; TMR, targeted medication review.

2 to 15 Part D–covered drugs that beneficiaries had to be taking to receive MTM services.[4] In 2010, this range changed to a minimum requirement of 2 to 8 covered drugs.[5] In 2009, 28.5% of plans restricted enrollment to patients taking 8 or more Part D drugs,[4] which increased to 66.4% in 2010 (**Figure 2**).[4-13] In every year since 2010, the majority of Part D plans have required the use of 8 Part D drugs for a beneficiary to meet program eligibility, with 71% of plans requiring 8 or more Part D drugs in 2018.[13]

In 2009, beneficiaries also had to be likely to incur an annual cost of at least $4000 for covered Part D drugs to be eligible for the MTM program.[4] In 2010, the annual cost threshold was lowered from $4000 to $3000.[5] In 2012, this threshold increased slightly from $3000 to $3100.20 and has continued to increase annually by a specified annual percentage.[7] The annual cost thresholds for 2018 and 2019 were $3967 and $4044, respectively.[13,14]

Since their implementation in 2006 through 2009, most Medicare Part D MTM programs have been identifying eligible beneficiaries on a monthly or quarterly basis by running their targeting algorithms.[4] The 2010 CMS regulations required Part D plans to at least identify (or target) beneficiaries on a quarterly basis for enrollment in their MTM program.[5] In 2009, the methods of enrollment were "opt in" (ie, eligible beneficiaries must actively enroll), "opt out" (ie, eligible beneficiaries are automatically enrolled), or a combination of both.[4] However, since 2010, CMS has only allowed an opt-out method.[5-13]

Targeted Interventions

Initially, the Part D MTM program was designed to include any type or combination of MTM interventions (Table). Plan sponsors could decide whether services were provided to the beneficiary and/or the healthcare provider. Sponsors could provide MTM services via telephone, e-mail, mail, or any combination of these delivery vehicles. The most common MTM interventions reported by Part D plan sponsors for 2009 were medication reviews, refill reminders, intervention letters, educational newsletters, prescriber consultations, drug interaction screenings, case management, and a medication profile or list.[4]

In 2010, plan sponsors were required to offer a minimum level of MTM services for beneficiaries enrolled in

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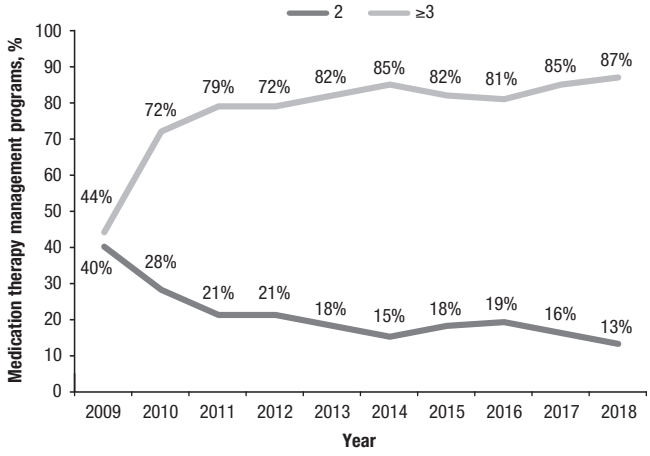
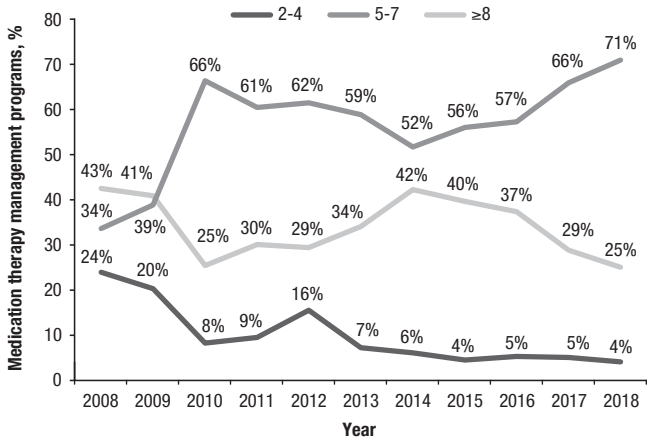
Figure 1 Chronic Disease Thresholds Reported by Medicare Part D Medication Therapy Management Programs



Sources: References 4-13.

Figure 2 Minimum Number of Covered Part D Drugs Reported by Medicare Part D Medication Therapy Management Programs



Sources: References 4-13.

the MTM program, including interventions for beneficiaries and prescribers.[5] These minimum services included an annual comprehensive medication review and quarterly targeted medication reviews.[5] In 2013, it became mandatory to provide beneficiaries with a written summary of their comprehensive medication review in a specified document, which was named the Standardized Format.[15]

The Standardized Format provided a means to document expected content in a consistent form. Long-term care beneficiaries who had been initially excluded from the comprehensive medication review requirement were now included in the 2013 changes.[7] In 2010, plan sponsors were also able to provide additional services beyond those required services, and 48.4% of MTM programs provided a general education newsletter to the beneficiary, 15.2% programs had a refill reminder, and 10.3% instituted a case-management referral.[5]

MTM Program Reporting

Before 2010, Part D plan sponsors were required to report several program-specific data elements to CMS, including the number of beneficiaries eligible for MTM services, the reasons beneficiaries opted out of the MTM program, and the costs and total numbers of 30-day prescription equivalents for each participating beneficiary.[16] Starting in 2008, specific information about services rendered at the beneficiary level were also required to be reported by sponsors.[16]

Starting in 2010, the reporting requirements expanded to include[6]:

- The percentage of beneficiaries receiving a comprehensive medication review
- The number of targeted medication reviews conducted
- The number of prescriber interventions
- Changes in medication therapy resulting from interventions.

The goal of expanding these data-reporting elements was to enable a more vigorous analysis of the MTM program and the interventions to evaluate best practices.

CMS publicly reports how well Part D drug plans perform on several categories, such as quality of care and customer service, using the Star Rating System.[17] The MTM program completion rate for comprehensive medication reviews (ie, the percentage of Part D plan members aged ≥18 years who received a comprehensive medication review among all those who met the eligibility criteria for MTM services) started out as a display measure, and was then added to the Part D Star Ratings in 2016 as a process measure.[11] Using data from 2014 and 2015, the MTM program comprehensive medication review completion rate for Medicare Advantage prescription drug plans and prescription drug plans were 30.9% and 15.4%, respectively, for rating year 2016[18] and 45.6% and 25.3%, respectively, for rating year 2017.[19]

CMS also developed new audit performance elements for MTM programs that were piloted in 2016 to monitor the compliance and quality of the MTM program plan sponsor.[11] These audit elements evaluated the appropriateness of the plan sponsor's enrollment and disenrollment of eligible beneficiaries into their MTM programs, and whether beneficiaries were provided a comprehensive medication review and/or targeted medication review.[20]

Starting in 2013, Part D plan sponsors were required to post information about their MTM program on their Part D plan's website, including the plan's MTM eligibil-

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ity requirements, whom to contact for more information, and a high-level summary of the services offered.[21] Plan sponsors were also encouraged to provide access to a blank personal medication list.[21]

In 2014, the website requirements expanded to include a web page dedicated to the MTM program with all the previous requirements, access to a personal medication list, and a description of how a beneficiary is notified of the MTM program eligibility.[22] CMS also suggested that the web page be accessible by 2 or fewer clicks from the sponsor's Medicare drug plan website.[22]

Shortly after the 2014 requirements took effect, only 59.5% of a convenience sample of Part D plans were compliant with the elements of the guidance, including having a dedicated MTM program web page that incorporates basic information about the program and its eligibility requirements, providing access to a blank personal medication list on the web page, and making it easy to access the dedicated web page or the MTM program information.[23] A more recent evaluation of compliance with 2016 website requirements that used a random sample of 106 Part D plan contracts showed that only 51% were compliant.[24]

Discussion

In 2008, the American Pharmacists Association and the National Association of Chain Drug Stores Foundation published Medication Therapy Management in Pharmacy Practice: Core Elements of an MTM Service Model (version 2.0),[25] which is a model framework for implementing effective MTM services. The services described in this model are dependent on interdisciplinary collaboration between healthcare professionals to optimize medication use and encompass a patient-centered process of care.

This model framework identified the following 5 core elements of MTM services delivery[25]:

1. Medication therapy review
2. Personal medication record
3. Medication-related action plan
4. Intervention and/or referral
5. Documentation and follow-up.

All of these elements are found in the current CMS requirements for Part D MTM programs, but initially CMS provided sparse guidance on how Part D MTM plan sponsors should design and implement their MTM programs.[4] MTM services were not specified by CMS until 2010, with the inclusion of the comprehensive medication review, and in 2013, with the requirement that the Standardized Format be used to provide a written summary of the comprehensive medication review to beneficiaries and/or to their caregivers.[5,8]

There has also been increasing guidance on how plans can set eligibility criteria for their MTM services. Early in the MTM program, Part D sponsors' restrictive eligibility requirements resulted in only 11% of Part D enrollees being eligible for MTM services in 2008.[26] To increase enrollment eligibility, CMS set maximum thresholds for eligibility requirements in 2010 and reduced the eligibility threshold to $3000.[6,26] Based on an analysis of prescription drug data, CMS predicted that approximately 25% of the Part D population would be eligible for MTM services in 2010, using these new requirements.[27] However, the lowered thresholds for eligibility were still unsuccessful in improving access to MTM services, with fewer than 8% of Part D enrollees being eligible in 2011.[27]

The criteria that plan sponsors chose continued to be restrictive. In a study of 532 Medicare Part D contracts in 2012, variation in MTM enrollment existed across plan sponsors, ranging from 0.2% to 57.3%.[28] Plans that had more restrictions had a lower enrollment rate; the enrollment rate was 16.4% with contracts requiring 2 chronic conditions and 9.2% with contracts requiring 3 chronic conditions. One plan targeted patients who had 3 of 4 diseases (asthma, chronic heart failure, rheumatoid arthritis, and schizophrenia), which have only a 0.1% chance of occurring together.[28]

The study's researchers proposed that plan sponsors strategically decide the amount they are willing to pay for MTM services and develop eligibility criteria accordingly.[28] Another analysis of MTM eligibility requirements and enrollment patterns showed that in the 2010 to 2014 time frame, between 50% and 80% of plans chose a minimum of 3 chronic diseases and/or a minimum of 8 Part D drugs.[29]

The MTM program criteria and the restrictiveness of the eligibility criteria might have been determined by financial considerations.[29] There are no specific funds directed toward paying for MTM programs, and there are no rewards for optimizing medication therapy in plans that provide only pharmacy benefits and no medical benefits for their members. MTM programs are paid out of administrative funds as a component of plan bids for a contract with CMS. These administrative funds are to cover all costs of managing and administering the Part D plan. To keep the costs low for the MTM program, plans may limit the amount of resources allocated for the programs, resulting in restrictive criteria to minimize beneficiary eligibility. Remodeling the current budget to rely on funds specifically carved out for the MTM program, rather than administrative costs, may offer an opportunity to include more beneficiaries.[29]

Prescription drug plans are stand-alone plans that are responsible for covering prescription drugs and are not at risk for medical or overall healthcare costs; these plans are less incentivized to invest in MTM programs than plans

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that are at risk for overall healthcare costs.[30] Most Medicare Advantage prescription drug plans are responsible for medical costs and prescription drug coverage, so they have a greater incentive to implement programs to lower overall costs. Only approximately 33% of all Part D enrollees select Medicare Advantage prescription drug plans.[31]

The key lessons learned with the Medicare Part D MTM program are:

1. Little guidance was provided to Part D plans on MTM program design, which ultimately allowed plans the freedom to select restrictive requirements
2. The lack of a financial incentive to enroll beneficiaries has contributed to restrictive eligibility requirements
3. Without benefit from improved medication utilization, Part D plans do not fully engage beneficiaries in the MTM program.

More than a decade of experience with the existing Medicare Part D MTM program has led to the recent development and implementation of the Part D Enhanced MTM model. Through the Center for Medicare & Medicaid Innovation, a 5-year model program was launched on January 1, 2017, with 6 participating Part D prescription drug plan sponsors.[32] This model is testing whether providing Part D sponsors with additional payment incentives and regulatory flexibilities would promote innovative MTM programs and lead to improved outcomes and reduced costs.[32]

Participating prescription drug plans are offered a performance-based payment if their enrolled members' medical expenses (Medicare Part A and Part B costs) "are reduced by at least 2 percent in a given plan year compared to a benchmark that simulated their performance if they were not in the model."[33] Through this model, Part D sponsors have the autonomy to vary the intensity and type of MTM services provided based on beneficiary risk level, and they may leverage their own core competencies to accomplish these goals.[32]

The performance-based results of the Enhanced MTM model in 2017 were released on November 30, 2018.[33] The 1.7 million beneficiaries enrolled in the participating plans spent approximately $325 million less than the anticipated spending benchmark. Plan enrollment and savings were expected to increase during 2018.[33]

While we await additional details on the value of different approaches to MTM program design and implementation from the Enhanced MTM model, CMS and the Academy of Managed Care Pharmacy (AMCP) refer to MTM program resources, such as Medication Therapy Management in Pharmacy Practice: Core Elements of an MTM Service Model (version 2.0), the Agency for Healthcare Research and Quality systematic review, the Patient-Centered Medical Home: Integrating Comprehensive Medication Management to Optimize Patient Outcomes Resource Guide, and the Pharmacists' Patient Care Process.[34,35] Much of the current MTM program design and implementation have been based on these resources along with discussions with MTM providers and Part D plan sponsors, and on data analysis of Part D prescription claims and MTM program process measures.[16]

However, beneficiary-centered evaluations should also be encouraged to inform Part D MTM program requirements. For example, the Standardized Format is not always utilized as it was intended. In a survey of Medicare beneficiaries who had received a comprehensive medication review, 33% could not remember receiving the Standardized Format.[36] In that study, 67% of beneficiaries created their own smaller versions of the medication list instead of using the personal medication list in the Standardized Format.[37] A focus group of Medicare beneficiaries, caregivers, and case managers identified similar preferences for a more concise Standardized Format that could be shared with the entire healthcare team.[37]

Another study, the largest national survey to date of Medicare beneficiaries who had received a comprehensive medication review, showed that less than 50% of survey respondents perceived the Standardized Format as good or excellent in helping them to manage their medications.[38] The AMCP included the results of this national survey in comments to the 2020 CMS Call Letter, noting that beneficiary-focused modifications could result in improved use of the Standardized Format.[39]

Additional work to engage this group of stakeholders (ie, Medicare beneficiaries and their caregivers) as study participants, as well as codesigners of the Part D MTM program, will likely yield greater beneficiary engagement and beneficiary-centered outcomes.

Conclusion

When faced with data showing low enrollment rates in the Medicare Part D MTM program that resulted from restrictive criteria set by health plans, CMS changed its requirements to expand the eligible beneficiary pool for MTM services. Despite these changes, MTM services are still poorly utilized. The Enhanced MTM model with regulatory flexibility and financial incentives will provide additional guidance on opportunities to improve the MTM program. Beneficiary-centered evaluations should also be encouraged to inform Part D MTM program requirements.

As new models of care delivery focusing on Medicare beneficiaries evolve, it is critical to integrate the lessons learned from the MTM program to highlight the importance of information exchange and codesign, which may help to identify what matters most to Medicare beneficiaries.

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STAKEHOLDER PERSPECTIVE

Successes and Challenges of the Medicare Part D MTM Program

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The Medicare Part D drug program has been available for Medicare recipients since 2006. The program has had many successes and challenges. For many beneficiaries, the program has been lifesaving by obtaining better healthcare.

A retrospective study of the impact of Medicare Part D on patient outcomes and medication expenditures showed that the implementation of Part D had a positive effect on older adults' overall health outcomes.[1] Furthermore, a decrease in out-of-pocket costs for healthcare may encourage older adults to use their medications as prescribed more often, which, in turn, would help patients maintain better health.

PATIENTS: Medicare Part D beneficiaries find obstacles to attaining the most positive outcomes when deciding which plan to choose. Despite a plan finder feature on the Medicare website that helps seniors pick their plan, it can be a difficult choice. Out-of-network provider costs can be extensive, and beneficiaries may not be aware of them.

A nationwide study of seniors with Part D coverage reported that only 5.2% of beneficiaries chose the cheapest plan available in their area, and approximately 22% of beneficiaries chose a plan for which they spent at least $500 more than they needed to, and for features that they did not need.[2] Many elderly patients are unaware of the options for switching to plans that may be more appropriate for them.

McGarry and colleagues conducted a randomized study using hypothetical Part D plans to test the effect of simplifying the default amount of information provided on Medicare's plan finder on the ability to select low-cost plans.[3] By reducing the amount of financial information displayed in the finder, patients were able to choose lower-cost plans with no decrease in the average plan quality or pharmacy network size. But they also found a hypothetical increase in the take-up of convenience options, such as mail-order pharmacy. The investigators concluded that modifications to the plan finder's design can improve beneficiaries' plan choices in the Part D market.[3]

Ko and colleagues studied the phenomenon of social exclusion, which can occur as people age and are excluded from community-based activities.[4] Relative to Medicare Part D, this concept may also apply to educational efforts that detail Part D programs. The investigators noted that active social exclusion moderates the relationship between the cost of changing plans and the willingness to switch plans with Part D to better options.[4]

In a study of consumers' decisions to switch Part D plans, Han and Urmie noted that enrollees' knowledge of alternative plans is very limited.[5] They suggest that better access to tools could help people with a more informed decision-making process for choosing health plans.[5]

An ongoing problem with prescription medications is patient compliance. Compliance may be difficult for elderly patients because of the number of medications they are prescribed, the progression of chronic disease, and the concurrent use of nonprescription medications or herbal drugs.[6]

In a study on medication nonadherence in Part D enrollees, Hincapie and colleagues noted that low adherence can be a predictor of poor health outcomes in patients with chronic disease.[7] The elderly may be unable to recognize adherence issues with medications for chronic conditions. The investigators found inconsistencies between self-reported adherence and Medicare claims data, indicating a need for educational and interventional opportunities.[7]

In their study in this current issue, Gray and colleagues detail the impact of the Medicare Part D medication therapy management (MTM) program from its inception in 2006 to the present.[8] They note that when the MTM program began, it required Part D plan sponsors to offer MTMs to plan enrollees. Specific MTM services now include annual comprehensive medication review completion rates, a written summary using the prescribed Standardized Format, and a required quarterly targeted medication. Gray and colleagues conclude that MTM utilization remains low, despite efforts to increase its use by elderly patients. One reason for this low utilization is a lack of proper reimbursement for MTM services for providers.[8]

In an assessment of more than 400 MTM beneficiaries, Brandt and colleagues examined beneficiaries' perspectives on the Standardized Format.[9] Less than 50% of

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respondents perceived the Standardized Format measurement as very good or excellent in helping to manage their medications, indicating that refinement of the Standardized Format can help patients to meet their needs and medication adherence.[9]

PHARMACISTS: John and colleagues examined the outcomes of pharmacist-directed MTM for Medicare patients with chronic kidney disease (CKD).[10] They evaluated medication-related problems associated with CKD, nonadherence, medication reconciliation, and the contributions of pharmacists through MTM programs. The study included patients with CKD and comorbidities, who often receive complex pharmacotherapeutic regimens that can be difficult to comply with. The role of the pharmacist positively affected the overall care of patients using MTM.[10]

Although few studies include pharmacists as part of an interdisciplinary care approach for patients with CKD, this can be cost-effective for the healthcare system and for patients. John and colleagues noted that incorporating pharmacists into multidisciplinary teams in inpatient and ambulatory care settings can circumvent major drug-related problems throughout the MTM process, and that care plan includes optimal evidence-based medication and ensuring that patients have appropriate follow-up care.[10]

PAYERS: Significant issues with MTM applications remain, which mirror unresolved societal issues. In a study of 4455 patients with asthma, one of the most targeted diseases for the use of an MTM program, Lu and colleagues examined racial and ethnic disparities in meeting MTM eligibility requirements, noting that further studies are needed to examine these disparities and their influence on health outcomes.[11]

In a study of more than 3 million Medicare beneficiaries across all diseases states, Spivey and colleagues noted that the use of Medicare star ratings to determine eligibility as an alternative to MTM eligibility criteria would significantly reduce racial and ethnic disparities.[12] They concluded that a significantly larger number of black and Hispanic patients would be eligible for MTM than white patients under the star ratings criteria versus using only the standard MTM criteria.[12]

An MTM program is cost-effective for patients and for payers when used appropriately. When used as part of an MTM program, noncomprehensive medication reviews are cost-effective compared with comprehensive medication reviews, considering the estimated 1.5-million preventable medication-related adverse effects that occur with inappropriate medication use.[13] A comprehensive study of >400,000 beneficiaries, of whom 288,701 had medication-related problems, demonstrated that all the noncomprehensive medication reviews were the most cost-effective intervention, regardless of the plan's willingness to pay for such interventions. This cost-effectiveness finding further supports the continued use of MTM programs in a focused, targeted fashion.[13]

In a study with similar findings, Buhl and colleagues examined the impact of noncomprehensive medication reviews on MTM programs in 788,756 Part D beneficiaries.[14] Those who had noncomprehensive medication reviews had a greater likelihood of having positive medication changes than those who had comprehensive medication reviews. The researchers proposed that the Centers for Medicare & Medicaid Services should incorporate noncomprehensive medication review metrics in performance metric evaluations.[14]

The Medicare Part D MTM program provides a significant benefit for more than 40 million Americans. The continued refinement of this less-than-20-year-old program should be continued and supported.

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